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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,664	05/26/2006	Dongliang Lin	133697-0026	5344
35684 7590 05/19/2009				
BUTZEL LONG IP DOCKETING DEPT 350 SOUTH MAIN STREET SUITE 300 ANN ARBOR, MI 48104			EXAMINER SHEEHAN, JOHN P	
			ART UNIT 1793	PAPER NUMBER
			NOTIFICATION DATE 05/19/2009	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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### Office Action Summary

**Application No.**

10/580,664

**Applicant(s)**

LIN ET AL.

**Examiner**

John P. Sheehan

**Art Unit**

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1 to 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

I. In claim 2, lines 4 and 5, the phrase, "the secondary phases" lacks a clear antecedent.

### ***Claim Interpretation***

3. Claim 1 recites "about 0.01 to about 1.0 wt. % carbon" (claim 2, line 2, emphasis added by the Examiner). The meaning of the term "about" is flexible and is similar in meaning to such terms as approximately or nearly (Ex parte Eastwood, Brindle, and Kolb, 163 USPQ 316). In view of this, the C proportion that is described as "about" is not limited to the recited value but rather encompass proportions greater than and less than the recited limits.
4. Claim 2 recites; "said method comprising" (claim 2, line 1). In view of the use of the open terminology "comprising" in the claims, the claims are considered to be open to any additional process steps.

The transitional term "comprising", which is synonymous with "including," "containing," or "characterized by," is inclusive or open-ended and does not exclude additional, unrecited elements or method steps. See, e.g., *Mars Inc. v. H.J. Heinz Co.*, 377 F.3d 1369, 1376, 71 USPQ2d 1837, 1843 (Fed. Cir. 2004)

See MPEP 2111.03

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2 to 6, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iguchi et al. (Iguchi '521, Japanese Patent Document No. 61-9521, cited by the Examiner) in view of the ASM Materials Engineering Dictionary (cited by the Examiner).

Iguchi '521 teaches a method of making a silicon steel containing 3.2 to 4.5 wt% Si (Abstract). Iguchi '521 teaches that the steel contains 0.01 to 0.06 wt% C which is encompassed by the C content of 0.01 to 1.0 wt% recited in the instant claims. Iguchi '521 teaches that the Si steel is homogenized (Abstract) as recited in the instant claims. Iguchi '521's process also includes decarburization (Abstract) which is encompassed by claims 4 and 5. Iguchi '521 teaches that the Si steel is hot rolled and cold rolled to a final thickness of 0.3mm (Abstract). The hot rolling and cold rolling steps taught by Iguchi '521 are encompassed by hot rolling and cold rolling steps recited in claim 6. The

final Si steel sheet thickness taught by Iguchi '521 of 0.3 mm is encompassed by the sheet thicknesses recited in claims 8 and 9.

The ASM Materials Engineering Dictionary defines homogenizing as

A heat treating practice whereby a metal object  
is held at high temperature to eliminate or  
decrease chemical segregation by diffusion

The claims and Iguchi '521 differ in that Iguchi '521 does not teach a minimum of 5 wt% silicon and Iguchi '521 is silent with respect to the homogenization temperature and atmosphere recited in claims 2 and 3.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the upper limit of 4.5 wt% for the Si content taught by Iguchi '521 and the claimed lower limit of 5 wt% for the Si content recited in the instant claims are very similar and closely approximate each other, therefore one of ordinary skill in the art would have expected the alloy taught by the reference and the instantly claimed to have the same properties. *See in re Peterson*, 65 USPQ2d 1379, 1382, citing *Titanium Metals Corp. v. Banner*, 227 USPQ 773, 779 and MPEP 2144.05.

“a *prima facie* case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985) (Court held as proper a rejection of a claim directed to an alloy of “having 0.8% nickel, 0.3% molybdenum, up to 0.1% iron, balance titanium” as obvious over a reference disclosing alloys of 0.75% nickel, 0.25% molybdenum, balance titanium and 0.94% nickel, 0.31% molybdenum, balance titanium.).

Further, regarding the homogenization temperature and atmosphere, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because in view of the fact that the process of homogenization, its purpose and end result are well known in the art, as shown by the ASM Materials Engineering Dictionary, the determination by routine experimentation of the appropriate homogenization temperature and atmosphere are well within the skill of one of ordinary skill in the art.

7. Claims 7 and 10 to 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iguchi et al. in view of the ASM Materials Engineering Dictionary as applied to claims 2 to 6, 8 and 9.

Iguchi '521 and the ASM Materials Engineering Dictionary teach and are applied as set forth above.

The combination of Iguchi et al. in view of the ASM Materials Engineering Dictionary is silent with respect to the alloy properties recited in claims 7 and 10 to 12.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the alloy taught by the reference has a composition that substantially overlaps the alloy composition recited in the instant claims. Further, in view of the fact that the alloy taught by the reference is made by a process which is similar to, if not the same as, applicants' process of making the instantly claimed alloy, the alloy taught by the reference would be expected to

posses all the same properties as recited in the instant claims, In re Best, 195 USPQ, 430 and MPEP 2112.01.

"Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established, In re Best, 195 USPQ 430, 433 (CCPA 1977). 'When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.' In re Spada, 15 USPQ2d 655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. In re Best, 195 USPQ 430, 433 (CCPA 1977)." see MPEP 2112.01.

### ***Response to Arguments***

8. Applicant's arguments filed March 2, 2009 have been fully considered but they are not persuasive.
9. Applicants state that the amendment to claim 2 overcomes the rejection that the phrase, "the secondary phases" appearing in claim 2, lines 4 and 5 lacks a clear antecedent. The Examiner is not persuaded. As presently drafted, claim 2 recites, "said steel which includes carbides and ordered BBC phases" (claim 2, the penultimate line). This phrase does not lend antecedent basis to the phrase, "the secondary phases" but rather merely means that the steel contains carbides and BBC phases. There is nothing in the claim that connects these carbides and BBC phases to the secondary phases recited in lines 4 and 5.
10. Throughout applicant's arguments regarding the prior art rejection, applicant has made reference to several passages in Iguchi et al. (for example, applicant's response,

page 9, the second full paragraph; page 10, the last 3 lines of the penultimate paragraph) and has made statements regarding Iguchi et al. teachings (for example, applicant's response page 8, the penultimate paragraph; page 9, the penultimate paragraph; page 10, the first, second and third paragraph, etc.) It is noted that Iguchi et al. is in Japanese and that there is no English language translation of Iguchi et al. of record in this application. In view of this, and fact that the Examiner does not read Japanese, the Examiner cannot properly evaluate the cited passages in Iguchi et al. or verify applicant's statements regarding Iguchi et al. teachings.

11. Applicant's argument that Iguchi et al. teaches a maximum of 4.5 wt% Si while applicants claims recite a minimum of 5 wt% Si is not persuasive. As set forth above in the statement of the rejection, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the upper limit of 4.5 wt% for the Si content taught by Iguchi '521 and the claimed lower limit of 5 wt% for the Si content recited in the instant claims are very similar and closely approximate each other, therefore one of ordinary skill in the art would have expected the alloy taught by the reference and the instantly claimed to have the same properties. See *in re Peterson*, 65 USPQ2d 1379, 1382, citing *Titanium Metals Corp. v. Banner*, 227 USPQ 773, 779 and MPEP 2144.05.

"a *prima facie* case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed.Cir.1985)(Court held as proper a rejection of a claim directed to an alloy of "having 0.8%nickel,0.3%molybdenum,up to 0.1%iron,bal ance titanium" as obvious over a reference disclosing



alloys of 0.75%nickel,0.25%molybdenum,balance  
titanium and 0.94%nickel,0.31%molybdenum,bal  
ance titanium.).

### ***Conclusion***

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Sheehan whose telephone number is (571) 272-1249. The examiner can normally be reached on T-F (7:30-5:00) Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John P. Sheehan/  
Primary Examiner, Art Unit 1793

Jps